

## ABSTRACT OF THE DISCLOSURE

### SENSOR COMPENSATION FOR ENVIRONMENTAL VARIATIONS FOR MAGNETIC RANDOM ACCESS MEMORY

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A compensation system for an array of magnetic memory cells measures local operating conditions and compensates for changes in the operating characteristics of the magnetic memory cells in the array that result from the changes in the operating conditions. The magnetic field strength near the magnetic memory array is measured.

- 10 If the magnetic field strength rises above, or falls below certain predetermined threshold values, the write current used to alter the orientation of the magnetic fields in the magnetic memory cells is altered based upon the predetermined operating characteristics of the memory cells. A solenoid or similar type magnetic field generator may also be used to substantially compensate for variations in the sensed
- 15 magnetic fields. In addition, the temperature of the environment in which the magnetic memory cells are operating is sensed and appropriate changes made in the write current. Temperature control means may also be used to compensate for sensed changes in the local operating environment.

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